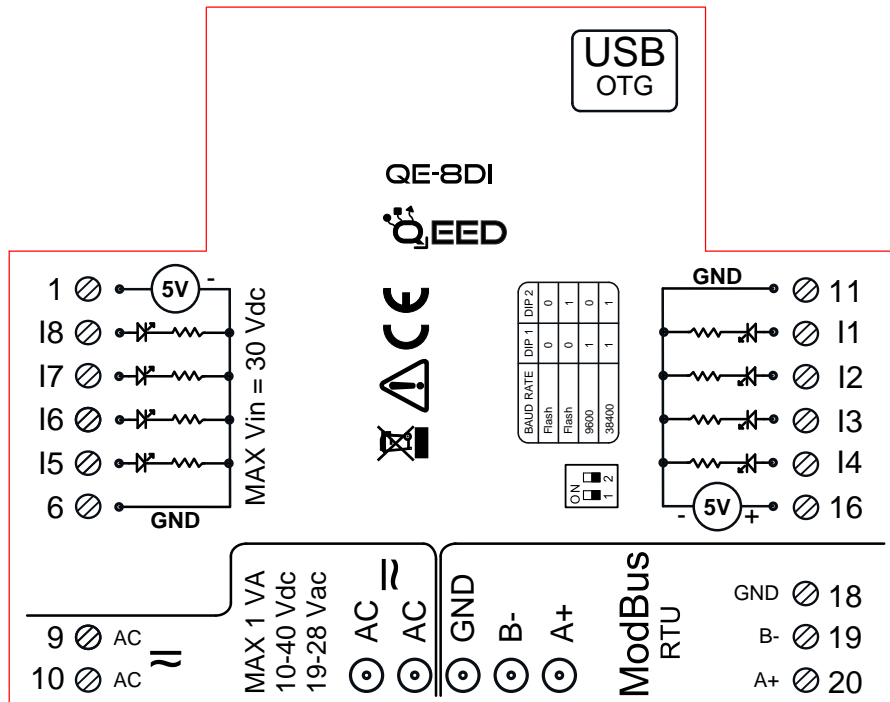## INSTRUCTION MANUAL — QE-8DI

DESCRIPTION:

The QE-8DI is a slave module with n°8 digital inputs. Thanks to the presence of the RS485 serial port it can perform advanced functions such as I/O module with Modbus RTU protocol. The QE-8DI behaves as slave device providing an output at 5 V for the detection of Optomos contact. It also accept 24 Vdc as digital input.

ELECTRICAL CONNECTIONS:

POWER SUPPLY:

10...40 Vdc or 20...28 Vac - Connectors 9 and 10, or by T-BUS connector (optional tool) on the base of the module.

DIGITAL INPUTS:

the QE-8DI accepts the input pulses up to 10 kHz, from mechanical contact, REED, 24 V, PNP.

SERIAL OUTPUT RS485:

available on connectors 18 (GND), 19 (B-), 20 (A+), or by T-BUS connector to be mounted on the module.

T-BUS CONNECTION (OPTION), needs T-BUS connector:

serial communication and power supply can be taken on the T-Bus. The female connector for the T-Bus is 5-way with pitch 3,81 mm.

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QUALITY ELECTRONIC DESIGN

PROGRAMMING THE DEVICE BY SOFTWARE   QE-8DI

Programming of the module QE-8DI may be performed in two different ways:

- via the free interface program FACILE QE-8DI through the micro USB port on the module or via RS485 connection;
- by connecting a PLC with RS485 serial connection (from terminals or T-Bus).

it is possible to configure the module by connecting it to the USB port of your PC without powering, this is possible because the QE-8DI is equipped with a microprocessor that manages the configuration and it is powered directly from the USB port.

To use the program FACILE QE-8DI, go on our website www.qeed.it in the PRODUCTS page, on the right menu, click on DOWNLOAD SOFTWARE and then click FACILE QE-8DI, you can install the program on your PC. Once downloaded, install it in the desired directory and run the program.

It is possible to use the program without connecting to the module, in this mode you can SAVE the configuration on your PC, which can then be sent to the QE-8DI later.

SERIAL PORTS AVAILABLE:

check the available COM ports, press the UPDATE button. Your PC will assign a virtual COM connection with the QE-8DI. Press START CONNECTION TO THE DEVICE. It will confirm you the connection was successful with the module. If the connection does not happen, please check the RS485 serial connection (A +, B-), the position of the dip-switches (switching off and on the device) and the COM generated automatically by the device.
After connecting, you can proceed with the configuration of the device.

FALLING:
you can enable the function " FALLING " with the selection of the relative box to the corresponding digital input (for the default the count is "rising").

FILTER:
you can select n°6 filter levels to set the sampling rate (to filter any bounces of contacts).

DOWN:
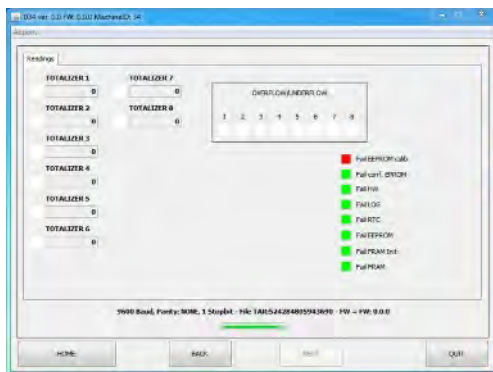selecting this field, the count is enabled on backwards (default is forward).

ENABLE NON-VOLATILE TOTALIZERS:
enabling this field, the totalizers are maintained even when turned off (non-volatile memory).

MODBUS COMMUNICATION:

This is the last window of the device configuration. The left column contains the parameters to be set for the communication speed BAUDRATE (from 1200 to 115200), the PARITY (None, Odd, Even), the STOP BIT (1 or 2), the Modbus address to be assigned to the device.

TOTALIZER:
shows the number of counts for the respective digital input (n° maximum of counting up to 2^{32}). It's possible to insert a value of arbitrary start.
The laterals "flag status digital input" indicate whether the corresponding digital input is active.

OVERFLOW / UNDREFLOW:
When one of the totalizers reaches the maximum allowed, the indicator turns YELLOW.

LED FAIL:
shows any malfunctions of the device.